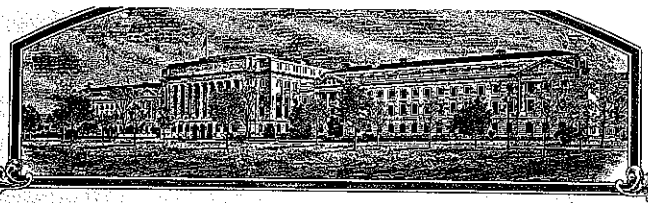

No. 200000328

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'25R49'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eighth day of May, in the year of our Lord two thousand one.

Attest:

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Pioneer Hi-Bred International, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME

3. VARIETY NAME
25R49

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

5. TELEPHONE *(include area code)*
(765) 945-7906

6. FAX *(include area code)*
(765) 945-8313

FOR OFFICIAL USE ONLY

PVPO NUMBER
200000328

FILING DATE
August 25, 2000

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Iowa

9. DATE OF INCORPORATION
May 1926

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Dr. Gregory C. Marshall
Pioneer Hi-Bred International, Inc.
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 2450.00
DATE 8/25/00

CERTIFICATION FEE:
$ 320.00
DATE 4-30-01

11. TELEPHONE *(include area code)*
(765) 945-7906

12. FAX *(include area code)*
(765) 945-8313

13. E_MAIL
marshallg@phibred.com

14. CROP KIND *(Common Name)*
Wheat

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum

16. FAMILY NAME *(Botanical)*
gramineae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 20 and 21 below)* ☒ NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Gregory C. Marshall

NAME *(Please print or type)*
Gregory C. Marshall

CAPACITY OR TITLE
Coordinator of Wheat Research

DATE
8/24/00

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

S&T-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete. *(See reverse for instructions and information collection burden statement)*

18A. Exhibit A. Origin and Breeding History of Pioneer Wheat Cultivar 25R49.

Pioneer® cultivar '25R49', a soft red winter wheat (Triticum aestivum L.) was developed by Pioneer Hi-Bred Int'l., Inc.. Using a modified pedigree selection breeding method, 25R49 was derived from the cross:

2510 sib*WBB076B1/WBB573C2

WBB076D1 was an experimental line derived from the cross: 2548sib*'Caldwell'/W9057B*'2553'. W9057B was derived from the cross: S76 sib./5517A5-5-1P-3. The cultivar, 5517A5-5-1P-3 was an experimental line from Purdue University, with the parentage: 'Redcoat'/8/'Norin33'/6/'Fairfield'/4/PI94587//'Fultz'/'Hungarian'/3/Fultz/Hungarian/5/'Trumbull'*3//'Hope'/'Hussar'/4/Trumbull/3/CI 12061//Fultz/Hungarian/7/'Knox'. The line WBB573C2 was derived from the cross:' Feland/'2550 sib. The detailed parentage of 25R49 is:

2510sib/10/S76sib/9/Redcoat/8/Norin33/6/Fairfield/4/PI94587//Fultz/Hungarian/3/Fultz/Hungarian/5/Trumbull*3//Hope/Hussar/4/Trumbull/3/CI12061//Fultz/Hungarian/7/Knox/11/Feland/2550sib

The single cross 2510 sib/WBB076D1 was made in the 1989 spring greenhouse cycle and was designated WBK1143. During the 1989 fall greenhouse cycle the F_1, WBK1143, was crossed with WBB573C2 and the final cross designated WBL0274. The subsequent breeding history of 25R49 is described below.

Year	Generation	
1989	Final cross	
1990	F_1	F_1 grown in transplant nursery at Windfall IN.
1990-91	F_2	Bulk populations grown at Windfall and Ft. Branch, IN. Individual spike selections made at Windfall, IN.
1991-92	F_3	Headrows from F_2 selections grown at Windfall, IN. Selected rows cut and threshed individually.
1992-93	F_4	A 3 row X 3-meter observation plot was planted at Windfall and Ft. Branch, IN. A meter section of the center row was harvested from each selected plot and threshed in bulk.
1993	F_5	Seed from selected F_4 plots were planted in the greenhouse at Windfall, IN. Eight spikes tracing to each selected F_4 plot were harvested.
1994	F_6	From each F_5 spike, 4 F_6 hill plots were grown in the spring transplant nursery at Windfall, IN. Hill plots from each F_5 spike were harvested in bulk.

1994-95	F_7	Preliminary yield testing of an F_5 selection from an F_6 hill plot bulk. This selection designated WBL0274C1.
1995-96	F_8	Advanced yield testing of WBL0274C1. 200 individual spikes were harvested from a small bulk increase.
1996-97	F_9	Elite yield testing of WBL0274C1. 200 purification headrows planted, offtype rows destroyed prior to maturity, 88 of the remaining rows were individually cut and threshed. Two spikes were taken from each harvested row.
1997-98	F_{10}	Elite yield testing continues of WBL0274C1. Seed from purification headrows planted in individual progeny plots which surround 200 headrows. Offtype plots and headrows destroyed prior to maturity. Equal number of spikes harvested from remaining progeny plots for a total of 1000 spikes. Progeny plots harvested in bulk which constitutes Breeder Seed. Bulk seed, headrow bulks, and spikes turned over to Pioneer's Parent Wheat Seed Group.
1998-99	F_{11}	Elite yield testing continues, line now designated YW587. Seed increase continues by Pioneer Parent Wheat Seed Group.
1999-2000	F_{12}	Elite yield testing continues, line designation now XW587. Seed increase continues by Pioneer Parent Wheat Seed Group.

Decision to release WBL2074C1 was made in August, 2000 at which time the commercial code, 25R49 was assigned.

The cultivar 25R49 was bred and selected for any and all of the following characteristics in the field environment: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking characteristics.

25R49 has been shown to be uniform and stable since the 7th generation, or for the last 5 generations. Variants are limited to slightly taller plants or awnless plants, at a frequency no greater than 1/15,000 in total.

18B. Exhibit B. Statement of Distinctness

25R49 is most similar to Pioneer variety 25R57 but with the following distinguishing characteristics:

1. The average plant height of 25R49 is 5.6 cm shorter than (Least significant difference, lsd(0.05) = 2.8 cm. See Table 1 for detailed comparison).

2. The flag leaf carriage at booting of 25R49 is nodding while that of 25R57 is erect.

3. The reaction of 25R49 to soil borne and wheat spindle streak mosaic virus is moderately resistant while that of 25R57 is susceptible (Table 2).

Table 1. 25R49 and 25R57 Comparisons

Environment (year/location)		Height	
		25R49	25R57
		cm	
1997/Altamont, IL	Average	91.4	92.7
	Number of obs.	2	2
	Minimum value	88.9	91.4
	Maximum value	94.0	94.0
	Standard deviation	3.6	1.8
1997/Mascoutah, IL	Average	90.2	101.6
	Number of obs.	2	2
	Minimum value	88.9	99.1
	Maximum value	91.4	104.1
	Standard deviation	1.8	3.6
1997/Napoleon, OH	Average	90.2	97.8
	Number of obs.	2	2
	Minimum value	88.9	94.0
	Maximum value	91.4	101.6
	Standard deviation	1.8	5.4
1998/Windfall, IN	Average	96.5	106.7
	Number of obs.	2	2
	Minimum value	96.5	106.7
	Maximum value	96.5	106.7
	Standard deviation	0.0	0.0
1999/Westport, IN	Average	94.0	100.3
	Number of obs.	2	2
	Minimum value	94.0	99.1
	Maximum value	94.0	101.6
	Standard deviation	0.0	1.8
1999/Ft. Branch, IN	Average	99.1	105.4
	Number of obs.	2	2
	Minimum value	99.1	104.1
	Maximum value	99.1	106.7
	Standard deviation	0.0	1.8
1999/Windfall, IN	Average	97.8	94.0
	Number of obs.	2	2
	Minimum value	96.5	91.4
	Maximum value	99.1	96.5
	Standard deviation	1.8	3.6
Total	Average	94.2	99.8
Total	Number of obs.	14	14
Total	lsd (0.05)	2.8	

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)

Pioneer Hi-Bred International, Inc.

ADDRESS *(Street and No. or RD No., City, State, and Zip Code)*

Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

FOR OFFICIAL USE ONLY

PVPO NUMBER 200000328

VARIETY NAME

25R49

TEMPORARY OR EXPERIMENTAL DESIGNATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: **Munsell Color Charts for Plant Tissues**
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[1] 1=Common 2=Durum 3=Club 4=Other (SPECIFY) : _____

2. VERNALIZATION:

[2] 1=Spring 2=Winter 3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

[2] 1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

[2] 1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

[2] 1 = Erect 2 = Recurved [2] 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

[ ][ ] Number of Days Earlier Than _____ *

[0][1] Number of Days Later Than 25R57 *

6

8. ANTHER COLOR:

[1] 1 = Yellow 2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns): **94 cm**

[ ] cm Taller Than _____*

[6] cm Shorter Than **25R57** _____*

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent 2=Present

B. WAXY BLOOM

[1] 1=Absent 2=Present

C. HAIRINESS (last internode of rachis)

[2] 1=Absent 2=Present

D. INTERNODE (SPECIFY NUMBER)

[1] 1= Hollow 2=Semi-solid 3=Solid

E. PEDUNCLE

[2] 1=Absent 2=Present

[32] cm Length

11. HEAD (at Maturity):

A. DENSITY

[2] 1=Lax 2=Middense 3= Dense

B. SHAPE

[1] 1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY): _____

C. CURVATURE

[3] 1 = Erect 2 = Inclined 3 = Recurved

D. AWNEDNESS

[1] 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

[2] 1 = White 2 = Tan 3 = Other (SPECIFY) : _____

B. SHOULDER

[2] 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate

C. BEAK

[2] 1 = Obtuse 2 = Acute 3 =Acuminate

D. LENGTH

[1] 1 = Short (ca. 7mm) 2 = Medium (ca. 8mm) 3 = Long (ca. 9mm)

12. GLUMES (at Maturity) *Continued*:

E. WIDTH

[2] 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

[1] 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

[1] 1=Rounded 2=Angular

C. BRUSH

[1] 1=Short 2=Medium 3=Long

[1] 1 = Not Collared 2 = Collared

D. CREASE

[1] 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[2] 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. Color

[3] 1=White 2= Amber 3= Red
4= OTHER (Specify)

G. PHENOL REACTION *(see instructions)*:

[3] 1 = Ivory 2 = Fawn
3 = Light Brown 4 = Dark Brown
5 = Black

F. TEXTURE

[2] 1=Hard 2=Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[0] Stem Rust *(Puccinia graminis* f. sp. *tritici)*

[0] Stripe Rust *(Puccinia striiformis)*

[3] Tan Spot *(Pyrenophora tritici-repentis)*
Field races

[0] Halo Spot *(Selenophoma donacis)*

[3] *Septoria nodorum* (Glume Blotch)
Field races

[0] *Septoria avenae* (Speckled Leaf Disease)

[3] *Septoria tritici* (Speckled Leaf Blotch)
Field races

[3] Scab (*Fusarium* spp.)
Field races

[3] Leaf Rust *(Puccinia recondita* f. sp. *tritici)*
Field races

[0] Loose Smut *(Ustilago tritici)*

[0] Flag Smut *(Urocystis agropyri)*

[0] Common Bunt *(Tilletia tritici* or *T. laevis)*

[0] Dwarf Bunt *(Tilletia controversa)*

[0] Karnal Bunt *(Tilletia indica)*

[3] Powdery Mildew *(Erysiphe graminis* f. sp. *tritici)*
Field races

[0] "Snow Molds"

14. Disease *(Continued)* (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[0]	"Black Point" (Kernel Smudge)	[0]	Common Root Rot *(Fusarium, Cochliobolus* and *Bipolaris* spp.*)*
[0]	Barley Yellow Dwarf Virus (BYDV)	[0]	Rhizoctonia Root Rot *(Rhizoctonia solani)*
[3]	Soilborne Mosaic Virus (SBMV) **Field races**	[0]	Black Chaff *(Xanthomonas campestris* pv. *translucens)*
[3]	Wheat Yellow (Spindle Streak) Mosaic Virus **Field races**	[0]	Bacterial Leaf Blight *(Pseudomonas syringae* pv. *syringae)*
[0]	Wheat Streak Mosaic Virus (WSMV)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)
[ ]	Other (SPECIFY)	[ ]	Other (SPECIFY)

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

[1]	Hessian Fly *(Mayetiola destructor)* **Biotypes E, L**	[ ]	Other (SPECIFY)
[0]	Stem Sawfly *(Cephus* spp.)	[ ]	Other (SPECIFY)
[0]	Cereal Leaf Beetle *(Oulema melanopa)*	[ ]	Other (SPECIFY)
[0]	Russian Aphid *(Diuraphis noxia*	[ ]	Other (SPECIFY)
[0]	Greenbug *(Schizaphis graminum)*	[ ]	Other (SPECIFY)
[0]	Aphids	[ ]	Other (SPECIFY)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

18D. Exhibit D. Additional Description of the Variety

1. Yield and Agronomic information.

   Preliminary yield testing of 25R49 began in the 1994-95 growing season and wide scale testing has been conducted from the 1995-96 growing season to the present. It has shown adaptation to the northern soft wheat regions based on tests conducted in Missouri, Illinois, Indiana, Ohio, and Michigan (Table 2).

2. Information on reaction to major diseases.

   Leaf rust – very good resistance to prevalent races in the northern soft wheat region.

   Powdery mildew – moderate resistance to the prevalent isolates of powdery mildew present in the soft wheat region.

   Soilborne and wheat spindle streak mosaic virus – good resistance to both viruses.

   Leaf blights – moderate resistance to the complex of most common organisms that cause leaf blights including: *Septoria tritici* blotch, *Stagnospora nodorum* blotch, and tan spot.

   Fusarium head blight – slightly below average resistance.

3. Information on reaction to major insects.

   Hessian fly – susceptible to the predominant biotypes of Hessian fly in the northern soft wheat region. Has screened susceptible to biotypes E, and L in tests conducted by the Dept. of Entomology, Purdue University, in conjunction with the USDA-ARS Insect and Weed Control unit.

4. Information on Milling and Baking Qualities.

   25R49 has demonstrated very good milling and baking qualities (Table 3).

Table 2. Varietal yield performance and agronomic characteristics from Pioneer Elite yield tests during the period 1996-1999.

Variety	Grain Yield	Test Weight	Winter Survival	Plant Height	Heading Date	Powdery Mildew	Leaf Rust	Leaf Blight	SSMV	SBMV
	bu/ac	lb/bu	1-9@	cm	Jan. 1	1-9@	1-9@	1-9@	1-9@	1-9@
25R49	**89.5**	**56.4**	**7.5**	**94**	**131.8**	**8.3**	**7.0**	**4.5**	**6.4**	**5.7**
25R57	83.9	55.8	5.5	100	130.9	7.8	6.6	5.0	4.6	3.7
2540	83.9	55.9	7.0	98	134.8	7.8	5.4	5.3	7.9	6.8
25R26	85.7	54.9	8.0	92	135.2	6.3	8.9	4.2	7.9	6.8
lsd (0.05)	2.71	0.59	1.28	2.8	1.08	0.8	1.07	1.23	0.73	1.04
# environ	35	30	1	7	6	2	6	3	8	3
# years	3	3	1	3	3	1	3	2	2	2

@' Scale of 1 - 9 where 9 = excellent or resistant, 1 = poor or susceptible.

SBMV data gathered at the University of Illinois SBMV nursery.

Data in above table gathered at Carlisle, IN, Ft. Branch, IN, Howe, IN, Westport, IN, Altamont, IL, Mascoutah, IL, Ridgway, IL, Blissfield, MI, Truxton, MO, Bucyrus, OH, Greenville, OH and Hamler, OH.

Table 3. Soft wheat quality data from the Pioneer Quality Lab, Johnston, IA., 1996-1999.

Variety	Flour Yield	Break Flr Yld	Flour Protein	AWRC	Cookie Diam.	Milling Score	Bake Score
	%	%	%	%	cm	1-9@	1-9@
25R49	**71.2**	**39.4**	**7.4**	**56.2**	**19.0**	**7**	**6**
2540	69.1	38.1	8.4	55.7	19.1	5	6
25R26	70.7	38.3	8.0	56.0	18.2	6	3
25R57	70.2	38.7	8.0	53.5	19.1	6	7
# observ	6 (12-14)	6 (14-16)	6 (14-16)	6 (14-16)	6 (14-16)		

Number of obsesrvations - values in parentheses are for check varieties.

Trait abbreviations used in the above table:

AWRC = Alkaline Water Retention Capacity.

Cookie = Cookie diameter in cm.

Milling score = a score which weights flour yield 60% and break flour yield 40%.
(1 = poor, 9 = excellent)

Baking score = a rating which weights cookie spread 60% and AWRC 40%.
(1 = poor, 9 = excellent)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

Pioneer Hi-Bred International, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

3. VARIETY NAME

25R49

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)

Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

5. TELEPHONE (Include area code)

(765) 945-7906

6. FAX (Include area code)

(765) 945-8313

7. PVPO NUMBER

200000328

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block. If no, please explain.* [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? [X] YES [ ] NO
If no, give name of country

10. Is the applicant the original owner? [X] YES [ ] NO *If no, please answer one of the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

[ ] YES [ ] NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

[ ] YES [ ] NO If no, give name of country

11. Additional explanation on ownership *(if needed, use reverse for extra space):*

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.